Date: Sun, 19 Jun 94 04:30:29 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #161
To: Ham-Space

Ham-Space Digest Sun, 19 Jun 94 Volume 94 : Issue 161

Today's Topics:

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 18 Jun 1994 05:22:26 GMT
From: ihnp4.ucsd.edu!agate!iat.holonet.net!ectech!shawn.marlow@network.ucsd.edu
Subject: Hey
To: ham-space@ucsd.edu

Hell to all of you from Moreno Valley, Ca. Just wanted to take the time
to know who some of you are. I am currently 15 years old, I OWN and
operate an amateur raido. My ID is Either KF6JE, or KF6WRB. I would like
to know were some of you are from. Calf really sux at repeaters. I am
current at advanced so i would like to hear some feed back from ya'all!

 -- Shawn

Date: 18 Jun 1994 14:19:32 -0500
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!not-for-mail@network.ucsd.edu
Subject: Information Re: Satellite contacts on FD
To: ham-space@ucsd.edu

Greetings.

I have never made a satellite contact on the OSCARs but am interested in doing so on FIELD DAY. I am in charge of field day at our local club here in Michigan and it will be my first attempt to work the satellite.

I have a program called TRAKSAT which will use the 2liners elements that are published on internet in this newsgroup to track the satellites but I have a few problems in using the output the program calculates for lack of additional information.

1. I am not sure what all the appreviations on the NASA format printout are for each satellite (i.e. I have heard that RS-10/11 is OSCAR 10 and OSCAR 11, but I don't know what AO-21, and many of the other satellites listed on the 2liners list. Is there a cross reference published somewhere on the net such in a mail-server from AMSAT or something like that?)

2. I need to know how to find out which mode a particular satallite is in or is suppose to be in during Field day, and what frequencies are being used for that mode. (or any day for that matter).

3. If I know which satellite I'm working, and I know which mode it is in, reference material should tell me the frequencies. However, my reference material on the satellites only covers some of the earlier models. Is there current information on the net regarding the new satellites and their modes of information?

Thanks to all who respond.

Jeff Johnson
KF8UW President, Blossomland Amateur Radio Association GRID EN-62
       We will be using our club callsign W8MAI during field day.

Date: Fri, 17 Jun 1994 09:00:00 MDT
From: swrinde!gatech!newsxfer.itd.umich.edu!zip.eecs.umich.edu!umn.edu!
lynx.unm.edu!news.cs.indiana.edu!nstn.ns.ca!newsflash.concordia.ca!
canopus.cc.umanitoba.ca!tribune.usask.@ihnp4.ucsd.edu
Subject: ORBS$168.2L.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT $ORBS-168.N
2Line Orbital Elements 168.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX June 17, 1994
BID: $ORBS-168.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83058B   94161.37059705 -.00000089 00000-0 10000-3 0 2881
2 14129 27.0950 323.3862 6022573 185.3079 163.3129 2.05878627 82647
UO-11
1 14781U 84021B   94164.07495908 .00000165 00000-0 35885-4 0 7007
2 14781 97.7863 178.9927 0010944 287.1976 72.8030 14.69219433549701
RS-10/11
1 18129U 87054A   94163.98699348 .00000037 00000-0 23695-4 0 9094
2 18129 82.9229 331.9456 0013017 40.7525 319.4600 13.72338190349333
AO-13
1 19216U 88051B   94166.34337152 -.00000405 00000-0 10000-4 0 9248
2 19216 57.7884 247.1622 7213082 343.7462   2.0006 2.09724920 45974
FO-20
1 20480U 90013C   94165.87456846 -.00000065 00000-0 -69459-4 0 6975
2 20480 99.0376 318.1343 0541065 344.7655 13.7694 12.83225459203835
AO-21
1 21087U 91006A   94166.94154505 .00000094 00000-0 82657-4 0 4803
2 21087 82.9390 143.6297 0036919 86.0554 274.4806 13.74541473169410
RS-12/13
1 21089U 91007A   94165.54353671 .00000065 00000-0 52315-4 0 7007
2 21089 82.9214 13.4113 0030198 113.5767 246.8572 13.74042529168288
ARSENE
1 22654U 93031B   94167.12210594 -.00000100 00000-0 00000 0 0 2620
2 22654   1.8681 99.2228 2919369 183.9006 172.6566 1.42203062 1186
UO-14
1 20437U 90005B   94166.19574678 .00000057 00000-0 39150-4 0   22
2 20437 98.5879 250.9992 0010525 193.3603 166.7289 14.29846532229307
AO-16
1 20439U 90005D   94165.27176083 -.00000002 00000-0 16126-4 0 8016
2 20439 98.5971 251.3159 0010737 197.6942 162.3867 14.29899811229188
DO-17
1 20440U 90005E   94165.71615950 .00000012 00000-0 21597-4 0 8016
2 20440 98.5984 252.0768 0010908 195.1875 164.8984 14.30039539229267

```
WO-18
1 20441U 90005F   94166.18122935  .00000026  00000-0  27064-4 0  8037
2 20441  98.5977 252.5380 0011436 194.4906 165.5950 14.30014120229337
LO-19
1 20442U 90005G   94165.73975260  .00000014  00000-0  22401-4 0  8009
2 20442  98.5974 252.3577 0011833 195.4192 164.6628 14.30109943229284
UO-22
1 21575U 91050B   94166.18613268  .00000058  00000-0  34055-4 0  5042
2 21575  98.4349 240.7242 0007185 303.1212  56.9305 14.36919228152790
KO-23
1 22077U 92052B   94167.69551354 -.00000037  00000-0  10000-3 0  3990
2 22077  66.0793 281.0075 0014358 287.6327  72.3125 12.86286638 86723
AO-27
1 22825U 93061C   94166.62421734  .00000022  00000-0  26645-4 0  2986
2 22825  98.6526 242.4464 0007983 211.0084 149.0633 14.27626226 37460
IO-26
1 22826U 93061D   94166.18484780  .00000030  00000-0  29892-4 0  2984
2 22826  98.6525 242.0491 0008198 216.6060 143.4552 14.27730366 37403
KO-25
1 22830U 93061H   94166.61624742  .00000038  00000-0  32793-4 0  3030
2 22830  98.5516 239.7422 0011533 176.8969 183.2290 14.28056827 37478
NOAA-9
1 15427U 84123A   94167.74678503  .00000084  00000-0  68618-4 0  8426
2 15427  99.0533 218.2332 0014197 218.9243 141.0907 14.13622176490280
NOAA-10
1 16969U 86073A   94167.73609929 -.00000017  00000-0  10932-4 0  7409
2 16969  98.5022 176.7464 0013788 335.5349  24.5180 14.24889628402540
MET-2/17
1 18820U 88005A   94168.23877222  .00000080  00000-0  57598-4 0  3126
2 18820  82.5406 268.5405 0016260 175.4425 184.6887 13.84717026322366
MET-3/2
1 19336U 88064A   94167.93501398  .00000051  00000-0  10000-3 0  2963
2 19336  82.5373 323.8588 0015676 265.2572  94.6761 13.16967664283222
NOAA-11
1 19531U 88089A   94167.78766704  .00000120  00000-0  89574-4 0  6621
2 19531  99.1721 156.6873 0012261 130.2107 230.0163 14.12994827295167
MET-2/18
1 19851U 89018A   94165.90933321  .00000043  00000-0  25085-4 0  2966
2 19851  82.5177 145.7365 0012706 230.6098 129.3939 13.84366225267372
MET-3/3
1 20305U 89086A   94167.77116453  .00000044  00000-0  10000-3 0   715
2 20305  82.5562 270.2734 0005343 297.9843  62.0727 13.04424679222844
MET-2/19
1 20670U 90057A   94166.13556307  .00000043  00000-0  24944-4 0  8018
2 20670  82.5472 210.0963 0016138 146.5713 213.6461 13.84189089200334
FY-1/2
1 20788U 90081A   94168.04506144  .00000199  00000-0  15986-3 0  9941
2 20788  98.8342 188.1798 0016270  12.5600 347.5966 14.01355709193685
```

```
MET-2/20
1 20826U 90086A   94166.42933899  .00000041  00000-0  24023-4 0  8094
2 20826  82.5251 147.3809 0015084  55.5160 304.7421 13.83582875187518
MET-3/4
1 21232U 91030A   94165.05402871  .00000050  00000-0  10000-3 0  7071
2 21232  82.5402 171.8070 0012003 189.1981 170.8923 13.16462951150947
NOAA-12
1 21263U 91032A   94167.77197316  .00000151  00000-0  87300-4 0   650
2 21263  98.6176 195.5592 0011704 237.5342 122.4700 14.22417411160479
MET-3/5
1 21655U 91056A   94165.39787066  .00000051  00000-0  10000-3 0  7168
2 21655  82.5511 118.7158 0011995 200.3127 159.7518 13.16830820136091
MET-2/21
1 22782U 93055A   94166.12482262  .00000057  00000-0  38317-4 0  3099
2 22782  82.5483 208.0682 0020786 230.0622 129.8705 13.83008846 39800
POSAT
1 22829U 93061G   94166.69145586  .00000055  00000-0  39714-4 0  2915
2 22829  98.6496 242.5762 0009469 198.4521 161.6334 14.28029401 37480
MIR
1 16609U 86017A   94166.84966268  .00004258  00000-0  66135-4 0  6428
2 16609  51.6459 193.0595 0002890  52.8807 307.2451 15.56338305475833
HUBBLE
1 20580U 90037B   94167.81733476  .00000504  00000-0  35122-4 0  4979
2 20580  28.4697 238.3578 0006329  84.7028 275.4269 14.90625547 29333
GRO
1 21225U 91027B   94165.55565142  .00002803  00000-0  59949-4 0  1073
2 21225  28.4608 250.4142 0003627 181.0248 179.0350 15.40930339 56533
UARS
1 21701U 91063B   94167.84430509 -.00002012  00000-0 -15477-3 0  5417
2 21701  56.9849 160.4316 0005880 102.9826 257.1873 14.96471238150884
/EX

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Date: Fri, 17 Jun 1994 08:59:00 MDT
From: library.ucla.edu!europa.eng.gtefsd.com!newsxfer.itd.umich.edu!jobone!
lynx.unm.edu!news.cs.indiana.edu!nstn.ns.ca!newsflash.concordia.ca!
canopus.cc.umanitoba.ca!tribune.@@ihnp4.ucsd.edu
Subject: ORBS$168.MISC.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT  $ORBS-168.M
Orbital Elements  168.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH,TX June 17, 1994
BID: $ORBS-168.M
TO ALL RADIO AMATEURS BT
```

```
Satellite: POSAT
Catalog number: 22829
Epoch time:      94166.69145586
Element set:     291
Inclination: 98.6496 deg
RA of node:       242.5762 deg
Eccentricity: 0.0009469
Arg of perigee:   198.4521 deg
Mean anomaly:     161.6334 deg
Mean motion:   14.28029401 rev/day
Decay rate:        5.5e-07 rev/day^2
Epoch rev:            3748
Checksum: 330

Satellite: MIR
Catalog number: 16609
Epoch time:      94166.84966268
Element set:     642
Inclination: 51.6459 deg
RA of node:       193.0595 deg
Eccentricity: 0.0002890
Arg of perigee:    52.8807 deg
Mean anomaly:     307.2451 deg
Mean motion:   15.56338305 rev/day
Decay rate:      4.258e-05 rev/day^2
Epoch rev:           47583
Checksum: 335

Satellite: HUBBLE
Catalog number: 20580
Epoch time:      94167.81733476
Element set:     497
Inclination: 28.4697 deg
RA of node:       238.3578 deg
Eccentricity: 0.0006329
Arg of perigee:    84.7028 deg
Mean anomaly:     275.4269 deg
Mean motion:   14.90625547 rev/day
Decay rate:       5.04e-06 rev/day^2
Epoch rev:            2933
Checksum: 335

Satellite: GRO
Catalog number: 21225
Epoch time:      94165.55565142
Element set:     107
Inclination: 28.4608 deg
```

RA of node: 250.4142 deg
Eccentricity: 0.0003627
Arg of perigee: 181.0248 deg
Mean anomaly: 179.0350 deg
Mean motion: 15.40930339 rev/day
Decay rate: 2.803e-05 rev/day^2
Epoch rev: 5653
Checksum: 268

Satellite: UARS
Catalog number: 21701
Epoch time: 94167.84430509
Element set: 541
Inclination: 56.9849 deg
RA of node: 160.4316 deg
Eccentricity: 0.0005880
Arg of perigee: 102.9826 deg
Mean anomaly: 257.1873 deg
Mean motion: 14.96471238 rev/day
Decay rate: -2.012e-05 rev/day^2
Epoch rev: 15088
Checksum: 306

/EX

Date: Fri, 17 Jun 1994 08:58:00 MDT
From: swrinde!gatech!newsxfer.itd.umich.edu!jobone!lynx.unm.edu!
news.cs.indiana.edu!nstn.ns.ca!newsflash.concordia.ca!canopus.cc.umanitoba.ca!
tribune.usask.ca!quartz.ucs.ualberta.@ihnp4.ucsd.edu
Subject: ORBS$168.WEATH.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT $ORBS-168.W
Orbital Elements 168.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX June 17, 1994
BID: $ORBS-168.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 94167.74678503
Element set: 842
Inclination: 99.0533 deg
RA of node: 218.2332 deg

```
Eccentricity: 0.0014197
Arg of perigee:   218.9243 deg
Mean anomaly:     141.0907 deg
Mean motion:   14.13622176 rev/day
Decay rate:        8.4e-07 rev/day^2
Epoch rev:           49028
Checksum: 311

Satellite: NOAA-10
Catalog number: 16969
Epoch time:      94167.73609929
Element set:     740
Inclination: 98.5022 deg
RA of node:       176.7464 deg
Eccentricity: 0.0013788
Arg of perigee:   335.5349 deg
Mean anomaly:      24.5180 deg
Mean motion:   14.24889628 rev/day
Decay rate:       -1.7e-07 rev/day^2
Epoch rev:           40254
Checksum: 342

Satellite: MET-2/17
Catalog number: 18820
Epoch time:      94168.23877222
Element set:     312
Inclination: 82.5406 deg
RA of node:       268.5405 deg
Eccentricity: 0.0016260
Arg of perigee:   175.4425 deg
Mean anomaly:     184.6887 deg
Mean motion:   13.84717026 rev/day
Decay rate:        8.0e-07 rev/day^2
Epoch rev:           32236
Checksum: 310

Satellite: MET-3/2
Catalog number: 19336
Epoch time:      94167.93501398
Element set:     296
Inclination: 82.5373 deg
RA of node:       323.8588 deg
Eccentricity: 0.0015676
Arg of perigee:   265.2572 deg
Mean anomaly:      94.6761 deg
Mean motion:   13.16967664 rev/day
Decay rate:        5.1e-07 rev/day^2
Epoch rev:           28322
```

Checksum: 344

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 94167.78766704
Element set: 662
Inclination: 99.1721 deg
RA of node: 156.6873 deg
Eccentricity: 0.0012261
Arg of perigee: 130.2107 deg
Mean anomaly: 230.0163 deg
Mean motion: 14.12994827 rev/day
Decay rate: 1.20e-06 rev/day^2
Epoch rev: 29516
Checksum: 296

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 94165.90933321
Element set: 296
Inclination: 82.5177 deg
RA of node: 145.7365 deg
Eccentricity: 0.0012706
Arg of perigee: 230.6098 deg
Mean anomaly: 129.3939 deg
Mean motion: 13.84366225 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 26737
Checksum: 331

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 94167.77116453
Element set: 71
Inclination: 82.5562 deg
RA of node: 270.2734 deg
Eccentricity: 0.0005343
Arg of perigee: 297.9843 deg
Mean anomaly: 62.0727 deg
Mean motion: 13.04424679 rev/day
Decay rate: 4.4e-07 rev/day^2
Epoch rev: 22284
Checksum: 296

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 94166.13556307
Element set: 801

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Inclination: 82.5472 deg
RA of node:       210.0963 deg
Eccentricity: 0.0016138
Arg of perigee:   146.5713 deg
Mean anomaly:     213.6461 deg
Mean motion:   13.84189089 rev/day
Decay rate:        4.3e-07 rev/day^2
Epoch rev:           20033
Checksum: 287

Satellite: FY-1/2
Catalog number: 20788
Epoch time:      94168.04506144
Element set:     994
Inclination: 98.8342 deg
RA of node:       188.1798 deg
Eccentricity: 0.0016270
Arg of perigee:    12.5600 deg
Mean anomaly:     347.5966 deg
Mean motion:   14.01355709 rev/day
Decay rate:       1.99e-06 rev/day^2
Epoch rev:           19368
Checksum: 339

Satellite: MET-2/20
Catalog number: 20826
Epoch time:      94166.42933899
Element set:     809
Inclination: 82.5251 deg
RA of node:       147.3809 deg
Eccentricity: 0.0015084
Arg of perigee:    55.5160 deg
Mean anomaly:     304.7421 deg
Mean motion:   13.83582875 rev/day
Decay rate:        4.1e-07 rev/day^2
Epoch rev:           18751
Checksum: 316

Satellite: MET-3/4
Catalog number: 21232
Epoch time:      94165.05402871
Element set:     707
Inclination: 82.5402 deg
RA of node:       171.8070 deg
Eccentricity: 0.0012003
Arg of perigee:   189.1981 deg
Mean anomaly:     170.8923 deg
Mean motion:   13.16462951 rev/day
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Decay rate:         5.0e-07 rev/day^2
Epoch rev:            15094
Checksum: 274

Satellite: NOAA-12
Catalog number: 21263
Epoch time:       94167.77197316
Element set:       65
Inclination: 98.6176 deg
RA of node:         195.5592 deg
Eccentricity: 0.0011704
Arg of perigee:     237.5342 deg
Mean anomaly:       122.4700 deg
Mean motion:    14.22417411 rev/day
Decay rate:         1.51e-06 rev/day^2
Epoch rev:             16047
Checksum: 286

Satellite: MET-3/5
Catalog number: 21655
Epoch time:       94165.39787066
Element set:      716
Inclination: 82.5511 deg
RA of node:         118.7158 deg
Eccentricity: 0.0011995
Arg of perigee:     200.3127 deg
Mean anomaly:       159.7518 deg
Mean motion:    13.16830820 rev/day
Decay rate:          5.1e-07 rev/day^2
Epoch rev:            13609
Checksum: 309

Satellite: MET-2/21
Catalog number: 22782
Epoch time:       94166.12482262
Element set:      309
Inclination: 82.5483 deg
RA of node:         208.0682 deg
Eccentricity: 0.0020786
Arg of perigee:     230.0622 deg
Mean anomaly:       129.8705 deg
Mean motion:    13.83008846 rev/day
Decay rate:          5.7e-07 rev/day^2
Epoch rev:             3980
Checksum: 301

/EX
```

Date: Sat, 18 Jun 94 09:23:06 EDT
From: ihnp4.ucsd.edu!swrinde!gatech!newsxfer.itd.umich.edu!jobone!lynx.unm.edu!
news.cs.indiana.edu!nstn.ns.ca!newsflash.concordia.ca!sifon!clouso.crim.ca!
comback!opti!jmuise@network.ucsd.edu
Subject: Satellite imagery
To: ham-space@ucsd.edu

Can anyone tell me if any of the images generated by amateur satellites
have been made available for download in any other place besides directly
from the satellites themselves (eg. FTP or BBS downloads) ?
Thank you.

John.

Date: 18 Jun 1994 22:57:42 +1200
From: waikato!auckland.ac.nz!aukuni.ac.nz!kiwi!deepthnk!mconway@decwrl.dec.com
Subject: unix satelite tracking program
To: ham-space@ucsd.edu

I have a friend who is looking for a unix based program that can steer a
satelite antenna i.e can track a satellite in an inclined orbit. Anyone know
of such a program? If possible could you please send any replys to my friends
internet address: dave@.ncs.co.nz but if this isnt possible I will be
reading the newsnet board.

P.S he is also interested in the address of any place that sells 2nd hand
satellite equipment i.e antennas etc.

Cheers
Mark

-- Mark
```
       _/_/_/   _/_/_/_/       Mark Conway
      _/    _/    _/          Deep Thought BBS, Auckland, New Zealand
     _/    _/    _/          A FirstClass(tm) Macintosh GUI BBS
    _/_/_/      _/          Internet: mconway@deepthnk.kiwi.gen.nz
```

Date: Sat, 18 Jun 94 14:36:00 +0200
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!EU.net!news.eunet.fi!
gate.compart.fi!compart!leo.wikholm@network.ucsd.edu
Subject: Wanted: Copy of Wintrack 2.0
To: ham-space@ucsd.edu

-> > How can a friend of mine obtain a copy of Wintrack 2.0? Is it >
-> shareware?

     That is not a shareware program. The program is made by
     Paul E. Traufler. If you want more information about
     WinTrack please contact to him. Address is

     Paul E. Traufler
     111 Emerald Drive
     Harvest, AL 35749
     U.S.A

     Leo Wikholm, OH2JEC
     e-mail: leo.wikholm@compart.fi

Date: 18 Jun 1994 14:21:46 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!torn!newshost.uwo.ca!gateway!
mail@network.ucsd.edu
Subject: Wefax on R-7000
To: ham-space@ucsd.edu

Has anyone used the IF output of the R-7000 to drive a wide band IF
system for the reception of Wefax and/or APT ? If so, can you provide
info on the outboard IF system you used ?

lbol@julian.uwo.ca

End of Ham-Space Digest V94 #161
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